

Remarks

Claims 18-23, 25, and 27-35 were pending in the subject application. By this Amendment, claims 18, 22 and 25 have been amended. No new matter has been added by these amendments. Accordingly, claims 18-23, 25 and 27-35 are pending in the subject application and before the Examiner for consideration.

The amendments to the claims have been made in an effort to lend greater clarity to the claimed subject matter and to expedite prosecution. These amendments should not be taken to indicate the applicants' agreement with, or acquiescence to, the rejections of record. Favorable consideration of the claims now presented, in view of the remarks and amendments set forth herein, is earnestly solicited.

Claims 18-23, 25 and 27-35 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The applicants respectfully traverse this ground for rejection to the extent that it might be applied to the claims now presented for examination.

Please note that the claims have been amended herein to clarify that it is the compound that is immobilized on the support matrix. As is apparent from the description in the specification as well as the various examples in the specification, the affinity ligands are attached indirectly to the matrix via the triazine rings.

Claim 22 has been amended herein to correct a clerical error. The applicants appreciate the Examiner's careful review of the claims.

In view of the claim amendments as set forth herein, the applicants respectfully submit that the claims now presented for examination clearly and unambiguously set forth the metes and bounds of the claimed invention. Accordingly, the applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §112, second paragraph.

Claims 18-23, 25 and 27-35 have been rejected under 35 U.S.C. §112, first paragraph. The applicants respectfully traverse this ground for rejection because the applicants were in full possession of the claimed subject matter at the time of filing.

As is evident from the applicants' disclosure, including the examples, Y is an amine group that provides the affinity ligand function for the claimed compounds. Note, for example, that all of

the “Y” groups exemplified in the application are amines. Please also note the following text that immediately follows Table 3E:

Nature of amines (Y1, Y2 and Y3)

The amines selected from the synthesis of 3D libraries may be primary, secondary, aliphatic, aromatic, heterocyclic, aryl, chiral, charged or any combination of these.

Further, the examples make it quite clear that these amines are providing the affinity ligand function.

The test for an adequate written description has been stated in a variety of ways. An objective standard for determining compliance with the written description requirement is, “does the description clearly allow persons of ordinary skill in the art to recognize that he or she invented what is claimed.” In *re Gosteli*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989). Under *Vas Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991), to satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, and that the invention, in that context, is whatever is now claimed. It is respectfully submitted that applicants have met this test given the teachings of the specification and the subject matter of the claims.

Accordingly, the applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §112, first paragraph.

Claims 18-20 and 24-33 have been rejected under 35 U.S.C. §102(b) as being anticipated by Atkinson *et al.* (GB 2 053 926). The applicants respectfully traverse this ground for rejection because the Atkinson *et al.* reference does not disclose each and every element of the claimed invention.

While Atkinson *et al.* disclose X (as defined in present claim 18) as NH, they do not disclose that its group R₁ can be a triazine ring, as required by the current applicants’ claims.

It is a basic premise of patent law that, in order to anticipate, a single prior art reference must disclose within its four corners, each and every element of the claimed invention. In *Lindemann v.*

American Hoist and Derrick Co., 221 USPQ 481 (Fed. Cir. 1984), the court stated:

Anticipation requires the presence in a single prior art reference, disclosure of each and every element of the claimed invention, arranged as in the claim. *Connell v. Sears Roebuck and Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983); *SSIH Equip. S.A. v. USITC*, 718 F.2d 365, 216 USPQ 678 (Fed. Cir. 1983). In deciding the issue of anticipation, the [examiner] must identify the elements of the claims, determine their meaning in light of the specification and prosecution history, and identify corresponding elements disclosed in the allegedly anticipating reference. *SSIH, supra*; *Kalman [v. Kimberly-Clarke]*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983)] (emphasis added). 221 USPQ at 485.

The Atkinson *et al.* reference does not disclose compounds having the specific structure required by the current applicants' claims. Therefore, the applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §102(b).

Claims 18-23, 25 and 27-35 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Lowik *et al.* (WO 01/42228). Also, claims 1-22 and 24-33 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Lowik *et al.* (WO 01/42228) and Atkinson *et al.* (GB 2 053,926). The applicants respectfully traverse these grounds for rejection because the cited references, taken either alone or in combination, do not disclose or suggest the claimed subject matter.

The present invention addresses the problem of providing ligand libraries comprising 2 or more triazine groups with attached functional groups (Y), and to provide diversity and improved selectivity with respect to protein binding. The macrocyclic compounds of the prior art are not primarily intended as affinity ligands (i.e. small ligand molecules which bind within a larger 3-dimensional binding site). There is nothing in the prior art to suggest that macrocyclic ring compounds could be used as affinity ligands in their own right, as the intention was to form larger 3-dimensional pockets which would form affinity binding sites for the capture of small molecules, i.e. the exact opposite of 3-D ligands.

It is well established in the patent law that the mere fact that the purported prior art could have been modified or applied in some manner to yield an applicant's invention does not make the modification or application obvious unless "there was an apparent reason to combine the known elements in the fashion claimed" by the applicant. *KSR International Co. v. Teleflex Inc.*, 550 U.S. ____ (2007). Furthermore, an applicant's invention is not "proved obvious merely by demonstrating that each of its elements was, independently, known in the (purported) prior art." *Id.*

One finds neither the suggestion nor the expectation of success in the cited references, either separately or combined. Accordingly, the applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §103.

In view of the foregoing remarks and the amendment above, the applicants believe that the currently pending claims are in condition for allowance, and such action is respectfully requested.

The Commissioner is hereby authorized to charge any fees under 37 CFR §§1.16 or 1.17 as required by this paper to Deposit Account No. 19-0065.

The applicants also invite the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,



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